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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,956	09/09/2003	Caifang Yin	IP-024376	3049

1726 7590 07/25/2005

INTERNATIONAL PAPER COMPANY  
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EXAMINER
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FORTUNA, JOSE A

ART UNIT.	PAPER NUMBER
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1731

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/657,956

**Applicant(s)**

YIN, CAIFANG

**Examiner**

José A. Fortuna

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/05; 09/03</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 has been amended to include a time period of at least 75 minutes, but claim 2 includes times below the claimed range, i.e. 60-74 minutes.

Claims 1-23 are rejected under 35 USC §102(b) and §103(a). This rejection is set forth in the prior Office action mailed on December 08, 2004.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-24 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ragnar et al., EP 1 270 805 A2 with and without Applicants admission of prior art, (APA).

Ragnar et al. teach a method of bleaching in which a papermaking pulp is bleached using at least a chlorine dioxide stage, see abstract. Ragnar et al. teach also that the first stage of the bleaching sequence is a chlorine dioxide stage and it extends for 90 minutes or more. It is a well-known fact, as applicants recognizes on paragraph [0006], that the first two stages of a sequential bleaching process are delignification stages, delignification occurs,

probably along with bleaching. Claims 1-4 of Ragnar et al. teach that the consistency of the pulp at all stages is 10%, see paragraph [0018] and teach in claim 1 that the first stage is a chlorine dioxide stage having a retention time of more than 90 minutes. Since the process of the claimed invention and the one disclosed by the reference, Ragnar et al., seem to be the same or very similar, the reduction of hexauronic acids must be within the same range. It seems that Ragnar et al. teach all the elements of the claims or at least the minor modification(s) to obtain the claimed invention would have been obvious to one of ordinary skill in the art.

#### *Response to Arguments*

4. Applicant's arguments filed on April 04, 2005 have been fully considered but they are not persuasive.

Applicant argue that none of the references teach the delignification of a medium consistency pulp with chlorine dioxide for a time of at least 75 minutes and that none of the references teach the reduction of Hexauronic acids within the claimed range.

This is considered to be non-persuasive, because the references teach a multi-stage bleaching with chlorine dioxide at the first stage/stages and it is well known that the first stage with chlorine dioxide function as a delignification stage. This is also explicitly taught by Uchida et al. in column 6, lines 24-42. They also teach that the time of bleaching in the chlorine dioxide procedure is between 5 to 180 minutes, see column 6, lines 42-58. They teach that the consistency of the pulp in the bleaching stage is between 5 to 40%, which is considered to medium to high consistency, see column 5, lines 45-55. As to the arguments that the references do not teach the reduction on Hexauronic acids,

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the examiner contention was and still is, not that the reference explicitly teach this limitation, but that this property is either inherent to the cited references, since the process seems to be the same, or that this falls within the levels of ordinary skill in the art as the optimization of an result effective variable.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



José A Fortuna  
Primary Examiner  
Art Unit 1731

JAF